

Attorney's Docket No. 9563-22

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Kristina Gold

Confirmation No.: 3244

Serial No.: 10/593,997

Group Art Unit: 2821

Filed: September 22, 2006

Examiner: Duong, Dieu Hien

For: **RAISING ANTENNA EFFICIENCY FOR A PORTABLE
COMMUNICATION DEVICE**

Date :June 15, 2009

Mail Stop Appeal-Brief Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPELLANT'S BRIEF ON APPEAL UNDER 37 C.F.R. §41.37

Sir:

This Appeal Brief is filed pursuant to the "Notice of Appeal to the Board of Patent Appeals and Interferences" mailed April 23, 2009. The present Appeal Brief is being filed in response to the final Office Action mailed March 9, 2009.

Real Party In Interest

The real party in interest is assignee Sony Ericsson Mobile Communications AB, Lund, Sweden.

Related Appeals and Interferences

Appellant is aware of no appeals or interferences that would be affected by the present appeal.

Status of Claims

Appellant appeals the rejection of Claims 9-20 as set forth in the final Office Action of March 9, 2009 (hereinafter "Final Action"). Claims 9-20 remain pending as of the filing date of this Brief, are the subject of the present appeal, and stand rejected at least twice. The attached Appendix A presents the pending claims as they currently stand, as well as the corresponding status of each of the pending claims.

Status of Amendments

No claim amendment has been filed in the present case in response to the Final Action.

Summary of the Claimed Subject Matter

The present application includes portable communication devices providing raised antenna efficiency, including pending independent Claim 9. For embodiments of the present invention as recited in independent Claim 9, a portable communication device (FIG. 1, 10) may include a board (FIG. 2, 12) configured to receive electrical circuits (Specification, page 5, lines 10-11). The board includes a ground plane (FIG. 3, 20) and at least one throughhole (FIG. 3, 22). An antenna element (FIG. 2, 14) is provided on a first side of the board. An acoustic element (FIG. 2, 16) is placed on the board and aligned with the throughhole. A mesh (FIG. 5, 34) including an electrically conducting material is positioned between a cover (FIGs. 4 and 5, 28) of the acoustic element and the board. The mesh (FIG. 5, 34) is connected to the ground plane (FIGs. 4 and 5, 20) of the board to enhance the efficiency of the antenna.

Grounds of Rejection to be Reviewed on Appeal

1. Are Claims 9-12 and 15-19 properly rejected under 35 USC §102(b) as being anticipated by U.S. Patent Publication No. 2003/0068987 to Dufosse et al. (hereinafter "Dufosse")? (Final Action, page 2.) Appellant notes that the above cited portion of the Final Action does not state that Claim 15 is rejected under 35 U.S.C. §102, but that the Final Action does include, on page 3, a statement of rejection regarding Claim 15.

2. Are Claims 13-14 properly rejected under 35 USC §103(a) as being unpatentable over Dufosse in view of U.S. Patent No. 6,266,019 to Stewart et al. (hereinafter "Stewart")? (Final Action, page 4.)

3. Is Claim 20 properly rejected under 35 USC §103(a) as being unpatentable over Dufosse in view of U.S. Patent No. 6,879,849 to Begic (hereinafter "Begic")? (Final Action, page 4.)

Argument

I. Introduction

Claims 9-12 and 15-19 stand rejected as allegedly anticipated. To anticipate a claim, the reference must teach every element of the claim. M.P.E.P. § 2131. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Appellant respectfully submits that the pending claims are patentable over the cited references for at least the reasons that the cited references do not disclose or suggest each of the recitations of the independent claims. The patentability of the pending claims is discussed in detail hereinafter.

Claims 13, 14 and 20 stand rejected as allegedly obvious. To establish a *prima facie* case of obviousness under 35 U.S.C. § 103, the prior art reference or references, when combined, must teach or suggest all the recitations of the claims, and there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. M.P.E.P. §2143. As stated in the "Examination Guidelines for Determining Obviousness Under 35 U.S.C. §103 in view of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*" (M.P.E.P. §2141), a question regarding whether a claimed invention is obvious under 35 U.S.C. § 103 must include an analysis of the factors set forth in *Graham v. John Deere Co.* (383 U.S. 1, 148 USPQ 459 (1966)), which are described by the Supreme Court in the *KSR* decision to be

1) determining the scope and content of the prior art; 2) ascertaining the differences between the claimed invention and the prior art; and 3) resolving the level of ordinary skill in the pertinent art (hereinafter, the "*John Deere* factors"). The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. M.P.E.P. § 2143. A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR Int'l Co. v. Teleflex Inc.*, 550 U. S. 1, 15 (2007). A Court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.* at 13. When it is necessary for a Court to look at interrelated teachings of multiple patents, the Court must determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. *Id.* at 14.

II. The Rejection of Claims 9-20

A. Independent Claim 9 Is Patentable Over Dufosse

Claim 9 is rejected under 35 USC §102(b) as anticipated by DuFosse. Appellant respectfully traverses the rejection for at least the reason that DuFosse does not disclose or suggest several of the recitations of Claim 9. For example, Claim 9 recites, in part:

a mesh comprising an electrically conducting material positioned between a cover of the acoustic element and the board, wherein the mesh is connected to the ground plane of the board to enhance the efficiency of the antenna.

In rejecting Claim 9, the Final Action states that DuFosse discloses:

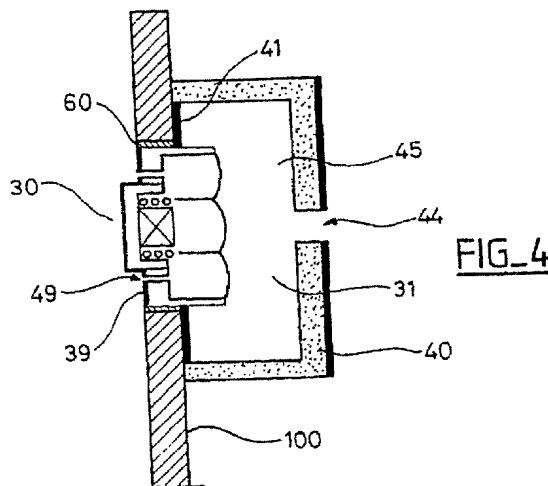
[a] mesh (60, Figure 4) comprising an electrically conducting material positioned between a cover of the acoustic element (30) and the board (100), wherein the mesh (60) is connected to the ground plane (41) of the board to enhance the efficiency of the antenna (40).

(Final Action, page 2.) In contrast with the Final Action allegation, Dufosse does not disclose or suggest "a mesh comprising an electrically conducting material positioned between a cover of the acoustic element and the board," as recited in Claim 9.

Instead, Dufosse merely describes "[s]eals 60, preferably made of metal." (Dufosse, column 4, lines 29-30.) Appellant respectfully submits that, although the seals are described as conductive, DuFosse is wholly silent regarding a mesh and/or synonymous structure thereof.

Responsive to Appellant's arguments, the Final Action states that Dufosse "clearly discloses, in Figure 4, a mesh (60) comprising an electrically conductive material positioned between a cover of the acoustic element (30) and the board (100)." (Final Action, page 5.) Appellant respectfully submits that the Final Action appears to be reading non-existing teachings into Dufosse. For example, the seal 60 occurs in one solitary recitation in the reference, which states that "[s]eals 60, preferably made of metal, can be provided." (Dufosse, column 4, lines 29-30.) Thus, in contrast with the Final Action allegation, the text of Dufosse is wholly silent as to "mesh".

Additionally, the Final Action refers to Figure 4 of Dufosse, which is reproduced below:



Appellant respectfully submits that no portion of the seal 60 as illustrated in Figure 4 appear to disclose or suggest a mesh.

The Final Action further states that "[s]ince the seal 60 in Figure 4 of Dufosse has the same material and structure as the claimed invention, it is considered as the "mesh" of the claimed invention." (Final Action, page 5.) Appellant respectfully submits that the Final Action assumes facts that are unsupported by the teachings of

the reference, namely that the seal (60) of DuFosse has the same material and structure as the mesh recited in Claim 9. As discussed above, the sole mention of the seal (60) is wholly silent regard a mesh structure and Figure 4 includes no illustrations suggesting a mesh structure. Accordingly, DuFosse does not disclose or suggest "a mesh comprising an electrically conducting material positioned between a cover of the acoustic element and the board," as recited in Claim 9. For at least these reasons, Appellant respectfully submits that Claim 9 is patentable over DuFosse. Also, dependent Claims 10-20 are patentable at least per the patentability of Claim 9 from which they depend.

Accordingly, Appellant respectfully requests reversal of the rejection of Claim 9 and the claims dependent therefrom for at least these reasons.

B. Dependent Claims 10-20 Are Patentable

As noted above, dependent Claims 10-20 are patentable at least per the patentability of independent Claim 9 from which they depend. As such, Appellant respectfully requests that the rejections of dependent Claims 10-20 be reversed for at least these reasons. However, Appellant submits that several of these dependent claims also contain separate bases of patentability.

1. Dependent Claims 17-19 Are Separately Patentable

Additionally, DuFosse appears to rely on a conductive portion of the acoustic element. For example, DuFosse states:

[t]he electrically conductive portion 36 of the transducer 30 complements the hole in the ground plane 41 of the antenna to incorporate the front acoustic cavity of the transducer within the cavity of the antenna. The frame 39 of the transducer can advantageously be extended to provide better electrical continuity of the ground plane 41.

(DuFosse, column 4, lines 30-36.) In this regard, recitations of new dependent Claims 17-19, which are directed to non-conductive acoustic element housing components are separately patentable over DuFosse. For example, Claim 17 recites, in part, "wherein the acoustic element comprises a non-conductive casing." Claims 18 and 19

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are similarly directed to an acoustic element with a plastic casing and a non-conductive cover, respectively.

In response to Appellant's arguments, the Final Action states that Dufosse discloses "a plastic casing (33, 34)" (regarding Claims 17, 18) and "the acoustic element cover (33, 34) comprises a non-conductive cover" (regarding Claim 19). (Final Action, page 3.) Appellant respectfully notes that the statements of rejection corresponding to Claims 17, 18 and Claim 19 appear to contradict one another as they cite the same structural recitation in Dufosse as teaching two distinctly different recitations of Appellant's claimed invention. Accordingly, the interpretation of Dufosse alleged by the Final Action is per se incorrect. Thus, dependent Claims 17-19 are separately patentable over DuFosse, the allowance of which is respectfully requested.

Appellant requests reversal of the rejections of Claims 17-19 for at least these additional reasons.

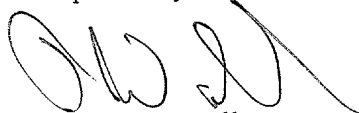
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III. Conclusion

In light of the above discussion, Appellant submits that pending Claims 9-20 are patentable over the cited references and, therefore, requests reversal of the rejections of those claims and passing of the application to issue.

It is not believed that an extension of time and/or additional fee(s) are required, beyond those that may otherwise be provided for in documents accompanying this paper. In the event, however, that an extension of time is necessary to allow consideration of this paper, such an extension is hereby petitioned for under 37 C.F.R. §1.136(a). Any additional fees believed to be due in connection with this paper may be charged to Deposit Account No. 50-0220.

Respectfully submitted,

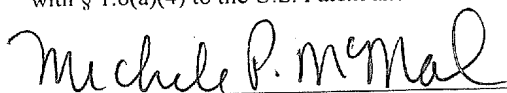


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CERTIFICATION OF TRANSMISSION

I hereby certify that this correspondence is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4) to the U.S. Patent and Trademark Office on June 15, 2009.



Michele P. McMahan

APPENDIX A – CLAIMS

- 1-8. Canceled.
9. (Previously presented) A portable communication device comprising:
a board configured to receive electrical circuits, the board comprising a ground plane and at least one throughhole;
an antenna element provided on a first side of the board;
an acoustic element placed on the board and aligned with the throughhole; and
a mesh comprising an electrically conducting material positioned between a cover of the acoustic element and the board,
wherein the mesh is connected to the ground plane of the board to enhance the efficiency of the antenna.
10. (Previously presented) The portable communication device of Claim 9, wherein the antenna element is positioned with at least a portion at a distance above the board, for defining an antenna volume between the board and the antenna element, and wherein the at least one hole is provided under the antenna element.
11. (Previously presented) The portable communication device of Claim 10, wherein the acoustic element is positioned on a second side of the board.
12. (Previously presented) The portable communication device of Claim 11, wherein an acoustic box associated with the acoustic element is positioned in the antenna volume.
13. (Previously presented) The portable communication device of Claim 9, wherein the mesh is connected to the ground plane using at least one electrically conducting springs.

14. (Previously presented) The portable communication device of Claim 9, wherein the mesh is connected to the ground plane using an electrically conducting gasket.

15. (Previously presented) The portable communication device of Claim 9, wherein the antenna element comprises a PIFA antenna element.

16. (Previously presented) The portable communication device of Claim 9, further comprising a cellular phone.

17. (Previously presented) The portable communication device of Claim 9, wherein the acoustic element comprises a non-conductive casing.

18. (Previously presented) The portable communication device of Claim 9, wherein the acoustic element comprises a plastic casing.

19. (Previously presented) The portable communication device of Claim 9, wherein the acoustic element cover comprises a non-conductive cover.

20. (Previously presented) The portable communication device of Claim 9, wherein the mesh is connected to the ground plane via solder.

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APPENDIX B – EVIDENCE APPENDIX
(NONE)

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APPENDIX C – RELATED PROCEEDINGS
(NONE)